



# HOIST LINE LENGTHS - 2900

**BOOM NO. 16 – LIFTCRANE**

Boom Length	Whip Line Left Drum 1 Part Line Ft.	Load Line Right Drum Ft.	Parts Of Line (Load Line)
40	100	340	7
50	120	420	7
60	140	500	7
70	160	580	7
80	180	580	6
90	200	650	6
100	220	650	5
110	240	650	4
120	260	650	4
130	280	670	4
140	300	670	3
150	320	670	3
160	340	670	3

Whipline: 3/4" – 6 x 25 Filler Wire, Regular Lay, Improved Plow Steel, Preformed, IWRC.

Load Line: 7/8" – 6 x 25 Filler Wire, Regular Lay, Improved Plow Steel, Preformed, IWRC.

When jib is used, increase length of whipline by twice the length of jib.

# adjustments . . . . . instructions

## MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin

### RANGE CHART - 2900 SERIES 2

BOOM NO. 16

RADIUS IN FT.	BOOM LENGTH - FEET												RADIUS IN FT.	
	40	50	60	70	80	90	100	110	120	130	140	150		160
	BOOM ANGLE IN DEGREES													
12	76.9													12
15	72.4	76.0	78.4	80.0	81.3									15
16	70.9	74.8	77.4	79.2	80.6	81.6								16
17	69.4	73.6	76.4	78.4	79.9	81.0								17
18	67.8	72.4	75.4	77.6	79.1	80.4	81.3							18
19	66.3	71.2	74.5	76.7	78.4	79.7	80.7	81.6						19
20	64.7	70.0	73.5	75.9	77.7	79.1	80.1	81.0	81.8					20
22	61.5	67.6	71.5	74.1	76.2	77.6	79.0	80.0	80.8	81.5				22
24	58.2	65.0	69.4	72.5	74.7	76.5	77.8	78.9	79.9	80.6	81.3			24
26	54.8	62.5	67.4	70.4	73.2	75.1	76.7	77.9	79.0	80.0	80.5	81.1		26
28	51.2	59.9	65.3	69.0	71.7	73.8	75.5	76.8	77.9	78.9	79.7	80.3	81.0	28
30	47.4	57.2	63.2	67.2	70.2	72.5	74.2	75.7	77.0	78.0	78.8	79.6	80.3	30
32	43.4	54.4	61.0	65.5	68.7	71.1	73.1	74.7	76.0	77.0	78.0	78.8	79.5	32
34	39.0	51.6	58.8	63.6	67.1	69.8	71.9	73.6	75.0	76.1	77.1	78.0	78.8	34
36	34.2	48.6	56.5	61.8	65.6	68.4	70.7	72.5	74.0	75.3	76.3	77.3	78.1	36
38	28.7	45.4	54.2	59.9	64.0	67.0	69.5	71.4	73.0	74.3	75.5	76.5	77.3	38
40	22.0	42.1	51.8	58.0	62.4	65.7	68.2	70.2	72.0	73.4	74.6	75.7	76.6	40
45		32.7	45.5	53.0	58.3	62.1	65.1	67.5	69.5	71.1	72.5	73.7	74.8	45
50		19.7	38.3	47.7	53.9	58.5	61.9	64.7	66.9	68.8	70.3	71.7	72.9	50
55			29.8	41.9	49.4	54.6	58.6	61.7	64.3	66.4	68.2	69.7	71.0	55
60			17.9	35.4	44.5	50.6	55.1	58.7	61.6	64.0	65.9	67.6	69.1	60
65				27.5	39.1	46.3	51.6	55.6	58.8	61.5	63.7	65.6	67.2	65
70				16.6	33.0	41.8	47.9	52.4	56.0	58.9	61.4	63.4	65.2	70
75					25.7	36.8	43.9	49.0	53.0	56.3	59.0	61.2	63.2	75
80					15.5	31.0	39.6	45.5	50.0	53.6	56.6	59.1	61.2	80
85						24.2	34.8	41.7	46.8	50.8	54.1	56.8	59.1	85
90							29.4	37.7	43.5	47.9	51.5	54.5	57.0	90
95							23.0	33.1	39.9	44.9	48.9	52.1	54.9	95
100								28.0	36.0	41.7	46.1	49.7	52.6	100
105								21.9	31.7	38.2	43.2	47.1	50.4	105
110									26.8	34.5	40.1	44.4	48.0	110
115									20.9	30.4	36.8	41.6	45.5	115
120										25.8	33.2	38.7	43.0	120
125										20.0	29.3	35.5	40.3	125
130											24.8	32.0	37.4	130
135											19.4	28.3	34.4	135
140												24.0	31.0	140
145												18.7	27.4	145
150													23.2	150
155													18.0	155

The radii shown above are the horizontal distances from the center of rotation to the center of the lower boom point. Add 12" to boom point radius for radius of sheaves when using single part line.

Machine must be level for correct length.

# adjustments . . . . . instructions

## MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin

### LIFTING CAPACITIES - 2900 SERIES 2

**BOOM NO. 16 - LIFTCRANE  
RATING OVER REAR ON EXTENDED OUTRIGGERS**

RAD.		CAPACITIES IN THOUSANDS OF LBS.												RAD.	
		Boom Length - Ft.													
		40	50	60	70	80	90	100	110	120	130	140	150		160
FT.	40	50	60	70	80	90	100	110	120	130	140	150	160	FT.	
12	130.0														12
15	120.0	120.0	120.0	109.5	103.8										15
16	117.5	117.0	116.0	106.2	102.4	98.0									16
17	116.0	115.0	114.0	103.9	99.4	95.7									17
18	113.7	113.8	111.8	101.0	97.3	93.0	86.0								18
19	105.7	106.2	104.5	98.2	94.6	91.0	85.6	69.2							19
20	98.6	99.6	98.2	96.3	92.1	88.6	83.3	69.2	69.2						20
22	86.5	88.2	87.4	85.9	84.6	83.0	80.3	69.2	69.2	66.6					22
24	76.6	79.0	78.6	77.5	76.3	74.9	74.0	69.2	69.2	64.5	51.8				24
26	68.3	71.3	71.3	70.5	69.5	68.2	67.3	66.9	65.6	61.9	51.8	48.5			26
28	61.2	64.7	65.2	64.6	63.7	62.6	61.7	61.3	60.1	59.0	51.8	47.9	42.9		28
30	54.9	59.0	58.9	58.8	58.5	57.8	57.0	56.5	55.4	54.4	51.8	46.7	42.0		30
32	49.3	54.0	53.8	53.6	53.3	53.2	52.9	52.4	51.4	50.4	50.3	45.2	41.3		32
34	44.1	49.5	49.4	49.2	48.9	48.8	48.5	48.3	47.8	46.9	46.7	44.3	40.5		34
36	39.3	45.5	45.6	45.4	45.1	45.0	44.7	44.5	44.3	43.9	43.7	42.9	39.3		36
38	34.6	41.8	42.4	42.2	41.8	41.7	41.5	41.3	41.0	40.8	40.6	40.2	38.2		38
40	29.8	38.4	39.5	39.3	39.0	38.9	38.6	38.4	38.1	37.9	37.7	37.5	36.8		40
45		30.6	33.7	33.5	33.2	33.1	32.8	32.6	32.3	32.1	31.9	31.6	31.4		45
50		22.8	28.7	29.1	28.8	28.7	28.4	28.2	27.9	27.7	27.4	27.2	26.9		50
55			23.5	25.7	25.3	25.2	24.9	24.7	24.4	24.2	23.9	23.7	23.4		55
60			17.9	22.5	22.5	22.4	22.1	21.9	21.6	21.4	21.1	20.9	20.6		60
65				18.7	20.2	20.1	19.8	19.6	19.3	19.1	18.8	18.6	18.3		65
70				14.5	18.0	18.1	17.8	17.4	17.3	17.1	16.8	16.6	16.3		70
75					15.1	16.5	16.2	16.0	15.7	15.5	15.2	15.0	14.7		75
80					11.7	14.7	14.8	14.6	14.3	14.0	13.8	13.5	13.2		80
85						12.4	13.5	13.3	13.0	12.8	12.5	12.3	12.0		85
90						12.7	12.0	12.2	11.9	11.7	11.4	11.2	10.9		90
95							10.1	11.3	11.0	10.7	10.5	10.2	9.9		95
100								9.9	10.1	9.9	9.6	9.4	9.1		100
105								8.3	9.3	9.1	8.8	8.6	8.3		105
110									8.0	8.4	8.1	7.9	7.6		110
115									6.6	7.6	7.5	7.3	7.0		115
120										6.5	6.9	6.7	6.4		120
125										5.3	6.0	6.2	5.9		125
130											5.1	5.5	5.4		130
135											4.0	4.7	4.9		135
140												3.9	4.2		140
145												3.0	3.5		145
150													2.7		150

Capacities do not exceed 85% of tipping with outriggers fully set, machine in a level position and gantry up. Operating radius is horizontal distance from centerline of rotation to a vertical line through the center of gravity of the freely suspended load.

Weight of load block, hook, weight ball, slings etc. is considered part of the load.

Machine equipped with Manitowoc-Hendrickson 8 x 4 carrier with 226" wheelbase, 105" front axle track, 100" rear axle track, 14:00 x 20 tires, 112" outriggers, 9' gantry, 10 part boom hoist, 1-3/8" pendant bridles, 26,000 lb. crane counterweight and 7,500 lb. front bumper counterweight.

# adjustments . . . . . instructions

## MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin

### LIFTING CAPACITIES - 2900 SERIES 2

**BOOM NO. 16 - LIFTCRANE  
RATING OVER SIDE ON EXTENDED OUTRIGGERS**

CAPACITIES IN THOUSANDS OF LBS.														
RAD. FT.	Boom Length - Ft.												RAD. FT.	
	40	50	60	70	80	90	100	110	120	130	140	150		160
12	130.0													12
15	120.0	120.0	120.0	109.5	103.8									15
16	117.5	117.0	116.0	106.2	102.4	98.0								16
17	116.0	115.0	114.0	103.9	99.4	95.7								17
18	113.7	113.8	111.8	101.0	97.3	93.0	86.0							18
19	105.7	106.2	104.5	98.2	94.6	91.0	85.6	69.2						19
20	98.6	99.6	98.2	96.3	92.1	88.6	83.3	69.2	69.2					20
22	86.5	88.2	87.4	85.9	84.6	83.0	80.3	69.2	69.2	66.6				22
24	75.9	75.8	75.6	75.5	75.3	74.9	74.0	69.2	69.2	64.5	51.8			24
26	66.5	66.3	66.2	66.0	65.8	65.7	65.5	65.4	65.2	61.9	51.8	48.5		26
28	59.1	58.9	58.7	58.6	58.4	58.2	58.0	57.9	57.7	57.5	51.8	47.9	42.9	28
30	53.1	53.0	52.7	52.6	52.3	52.2	52.0	51.8	51.6	51.5	51.3	46.7	42.0	30
32	48.2	48.0	47.8	47.7	47.4	47.3	47.0	46.9	46.7	46.5	46.3	45.2	41.3	32
34	44.1	43.9	43.7	43.5	43.2	43.1	42.9	42.7	42.5	42.3	42.1	41.9	40.5	34
36	39.3	40.4	40.1	40.0	39.7	39.6	39.3	39.2	38.9	38.7	38.5	38.3	38.1	36
38	34.6	37.4	37.1	37.0	36.7	36.5	36.3	36.1	35.9	35.7	35.5	35.3	35.0	38
40	29.8	34.8	34.5	34.3	34.0	33.9	33.7	33.5	33.2	33.0	32.8	32.6	32.4	40
45		29.5	29.2	29.0	28.7	28.6	28.3	28.1	27.9	27.7	27.4	27.2	27.0	45
50		22.8	25.2	25.0	24.7	24.6	24.3	24.1	23.9	23.7	23.4	23.2	22.9	50
55			22.1	21.9	21.6	21.5	21.2	21.0	20.7	20.5	20.3	20.0	19.8	55
60			17.9	19.4	19.1	19.0	18.7	18.5	18.2	18.0	17.7	17.5	17.2	60
65				17.4	17.0	16.9	16.6	16.4	16.1	15.9	15.6	15.4	15.2	65
70				14.5	15.3	15.2	14.9	14.7	14.4	14.2	13.9	13.7	13.4	70
75					13.8	13.7	13.4	13.2	12.9	12.7	12.4	12.2	11.9	75
80					11.7	12.5	12.2	12.0	11.7	11.5	11.2	11.0	10.7	80
85						11.4	11.1	10.9	10.6	10.4	10.1	9.9	9.6	85
90							10.1	9.9	9.6	9.4	9.1	8.9	8.6	90
95							9.3	9.1	8.8	8.6	8.3	8.1	7.8	95
100								8.3	8.0	7.8	7.5	7.3	7.0	100
105								7.7	7.4	7.1	6.9	6.6	6.3	105
110									6.8	6.5	6.2	6.0	5.7	110
115									6.2	6.0	5.7	5.5	5.2	115
120										5.5	5.2	5.0	4.7	120
125										5.0	4.7	4.5	4.2	125
130											4.3	4.1	3.8	130
135											3.9	3.7	3.4	135
140												3.0	3.1	140
145												3.0	2.7	145
150													2.4	150

Capacities do not exceed 85% of tipping with outriggers fully set, machine in a level position and gantry up. Operating radius is horizontal distance from centerline of rotation to a vertical line through the center of gravity of the freely suspended load.

Weight of load block, hook, weight ball, slings etc. is considered part of the load.

Machine equipped with Manitowoc-Hendrickson 8 x 4 carrier with 226" wheelbase, 105" front axle track, 100" rear axle track, 14:00 x 20 tires, 112" outriggers, 9' gantry, 10 part boom hoist, 1-3/8" pendant bridles, 26,000 lb. crane counterweight and 7,500 lb. front bumper counterweight.